

## **Energy Buzz – June 2007**

### **Energy Division Brings Efficiency Into Remodeled Space**

**By Linda Cawley, IDWR Information Specialist**

The Idaho Energy Division moved into a new space within the Idaho Water Center in May – a space that is the most energy efficient in the entire building.

When the Idaho Department of Water Resources decided it needed to expand its office space in Boise, the Energy Division was the group designated to occupy the new area. It was also agreed that the 4,355-square-foot area should be a showcase of energy efficiency.

Since the unoccupied space was unfinished when the department moved to the Water Center in October 2004, the Energy Division had a “clean slate.” After incorporating the recommendations made by lighting and heating consultants, its estimated that 131,537-kilowatt-hours (kWh) of energy will be saved annually.

#### **System upgrades**

Several assessments of the area showed that the lighting and the heating, ventilating, and air conditioning system could be improved. With 1,130 square feet of windows on two sides of the new office space, lighting sensors were installed to determine the level of artificial light in area. The sensors contain photocells that detect the lighting level in the areas along the windows and automatically adjust the fluorescent lights.

Offices and the conference room are also fitted with motion sensors that automatically turn lights off when the spaces are unoccupied. The layout of the fixtures is designed to take advantage of natural light and provide more constant light levels, for a savings of 5,432 kWh annually.

Since the windows face the south and east and meet in the corner where a conference room is located, a continuous perimeter window return air system was installed to remove solar heat gain, for an energy savings of 124,482 kWh annually.

“We knew there was a potential for the conference room to get unusually hot, so it only made sense to install the return air system to help reduce the temperature and make the area more comfortable,” says Bob Hoppie, Energy Division administrator.

#### **HVAC system**

IDWR's state office occupies most of the fifth floor, including the Energy Division, and the entire sixth floor of the Idaho Water Center. The building, completed in August 2004, uses geothermal wells for heating and cooling.

Prior to moving to the new space, energy specialists monitored the HVAC system, which resulted in some modifications to help minimize the potential for hot and cold spots. Under floor controls and duct treatments were installed to eliminate the introduction of dust, improve return airflow and provide enhanced cooling operation, for a savings of 1,623 kWh annually.

### **Special partnership**

Several entities played a part in upgrading the Energy Division space to make it more energy efficient. The University of Idaho's Integrated Design Lab, led by Kevin Van Den Wymelenberg, consulted with the Division personnel to outline the lighting.

Idaho Power Company provided financial support for the energy-related improvements, and Collier's International collaborated to incorporate the recommended improvement.

"This is a win-win situation," says Hoppie. "Any time different organizations can collaborate to make a building more energy efficient, less resources are used for heating and cooling, and the occupants are in a more comfortable and healthier environment."